homopolymer or a copolymer selected from the group consisting of cellulose, polyacrylics, polyurethanes, polyesters, polyvinyls, polyamides, polyolefins, and derivatives and mixtures thereof.

Please cancel claims 20-29, without prejudice to the filing of a subsequent continuing (divisional) application containing the subject matter of these claims.

REMARKS

Claims 1-19 are pending in the application. Claims 1 and 6 have been amended for purposes of clarity, although no new matter has been added by the amendments. Support for the amendments is found at least in claims 1 and 6 as originally filed. A marked-up version of claims 1 and 6 showing the changes made is enclosed herewith pursuant to 37 C.F.R. § 1.121.

I. Species Election

At page 2 of Paper No. 10, the Examiner has required that the applicants elect a single species for prosecution on the merits with respect to the following:

a. the instant carrier vehicle;

b. the instant solvent system; and

c. the instant NI absorbing agent.

Applicants elect, without prejudice, the species as set forth below for prosecution on the merits.

Generic	*Elected Species*
a. Carrier Vehicle	Polyacrylics
b. Solvent System	Acetone
c. NI Absorbing Agent	Diimmonium salt of the general formula (I) as set forth, for example, at page 6, lines 8-18, of the specification as filed.

The applicants make such election with the understanding that the Examiner will examine the generic claims of 1-19 with respect to the elected species, as set forth above, and upon finding such subject matter allowable, the Examiner will examine each of the non-elected species until all have been found to be allowable.

II. Restriction Requirement

The applicants have reviewed the Examiner's comments at pages 3-4 upon which he bases his assertion that the Restriction Requirement of Paper No. 9 is final, and maintain their traversal as set forth in the prior response.

III. Rejections Under 35 U.S.C. § 112, second paragraph

At pages 4-5 of Paper No. 10, the Examiner has made several rejections of claims 1-16 and 19 under 35 U.S.C. § 112, second paragraph, asserting that such claims are indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention on several grounds.

First, in paragraph A, the Examiner has asserted that claim 1 is indefinite for use of the phrase "based on the total weight of the composition." In particular, the Examiner asserts that it is unclear weather such phrase qualifies only the solvent system or the other components. The applicants disagree with the Examiner, as it is clear from the grammatical construction of the claim, as well as the information provided in the specification, including Examples 1-16, that such phrase is intended to modify each of the components recited in claim 1. However, in order to facilitate the prosecution of this application, the applicants have amended claim 1 to render it more clear in view of the Examiner's comments.

At paragraph B, the Examiner has rejected claim 6, asserting that the claim contains improper Markush terminology for use of the phrase "selected from." The applicants have amended claim 6 to correct the language and submit that claim 6 is fully compliant with formal requirements related to claiming in the alternative.

At paragraph C of Paper No. 10, the Examiner has rejected claim 6 asserting that the language "derivatives thereof" constitutes indefinite subject matter as a person of skill in the art would not have understood the metes and bounds of the claim. The applicants traverse this rejection. A person of skill in the art would have understood that derivatives of the recited polymers include polymers having the structures substantially similar to those recited, but which may have various functional groups substituted along the backbone and/or side chains of the polymer.

At paragraph D of Paper No. 10, the Examiner has rejected claim 10, asserting that it is not readily ascertainable as to the "type" of molecular weight to which the applicant refers. The applicants traverse this rejection. A person of skill in the art would have known that, when describing polymers, the molecular weight is conventionally a number average molecular weight; weight average molecular weights are only provided in particular circumstances, and in those circumstances the values are specifically identified as being "weight average."

At page 5, paragraph E, the Examiner has rejected claims 12 and 19, asserting that "dimethylaminoethylmetacrylate" as recited in each of those claims is misspelled. The applicants traverse this rejection. Diethylaminoethylmetacrylate is a polymer which the applicants intended to recite.

In view of the foregoing, it is respectfully requested that the Examiner reconsider and withdraw the rejections.

IV. Drawings

The Examiner has indicated that the filing of formal drawings is necessary. The applicants intend to file such drawings, but request issuance of a PTO Form 948 – Notice of Draftspersons' Patent Drawing Review, so any objections may be specifically attended to.

V. Rejection Based Upon U.S. Patent No. 5,998,535 of Haldankar

At pages 5-6, the Examiner has rejected claims 1-19 under 35 U.S.C. § 102(e) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over, U.S. Patent No. 5,998,535 of Haldankar ("Haldankar"). As basis for the rejection, the Examiner states that Haldankar "exemplifies" near infrared surface coating compositions defined "basically" as containing from about 1 to about 80 wt% of a pigment component, from about 10 to about 60 wt% of a polymeric dispersant derived from acrylic monomers, and about 5 to about 50 wt% of a liquid carrier, which includes organic solvents, about 5 to 70 wt% of a film forming resin which includes acrylic, alkyd and urethane resins, and other conventional additives. Therefore, according to the Examiner, Haldankar "anticipates the instantly claimed invention, in both content and character."

With respect to the obviousness rejection over Haldankar, the Examiner writes: "As to the dependent claims, the limitations are either disclosed by Haldankar, suggested by

Haldankar, or would have been obvious to the skilled artisan and with a reasonable expectation of success." The Examiner apparently is not rejecting the independent claims over Haldankar, and he fails to provide a basis for the obviousness rejection in the dependent claims, *i.e.*, an articulation of which of the elements he believes are lacking from the Haldankar disclosure, and why a person of ordinary skill in the art would have been motivated to make any modifications as necessary to arrive at the present invention, or, why such person would have had a reasonable expectation of success. The applicants respectfully traverse these rejections.

Haldankar discloses a polymeric dispersant. The dispersant is a free radical addition polymerization reaction product of a mixture of monomers, the monomers being a styrene monomer, specific alkylmethacrylate monomers, specific alkylacrylate monomers, specific hydroxyl-functional ethylenically unsaturated monomers and specific acrylate or methacrylate groups containing an amine functional moiety. Haldankar teaches that this dispersant can be used to formulate a "pigment dispersion composition" and/or a "surface coating composition."

The pigment dispersion and/or the surface coating composition of Haldankar may contain pigment components. Haldankar teaches that the pigment components for use in the pigment dispersion and/or surface coating compositions containing the polymeric dispersant are pigments that give the appearance of color such as white pigments, black pigments, blue pigments, violet pigments. Col. 6, lines 43-57. Haldankar does not teach or suggest any "pigments" that are near infrared absorbing agents, *i.e.*, capable of absorbing electromagnetic radiation with a wavelength of about 0.7 microns to about 5 microns. If the polymeric disperson taught in Haldankar is to be used in a surface coating composition, Haldankar teaches that the surface coating composition may be made up of about 2 to about 40% of the polymeric dispersant, about 5 to 70% of a film forming resin, and about 5 to 50% of a liquid carrier. The surface coating composition can optionally contain from about 1 to about 80% of the pigment component.

In contrast, the present invention, as recited in the claims, is directed to a liquid composition that includes about 0.01% to about 2% by weight of the total composition of a near infrared absorbing agent, an agent capable of absorbing electromagnetic radiation with a wavelength of about 0.7 microns to about 5 microns. Haldankar does not teach or suggest this

element of the claimed invention; therefore, for at least this reason, the Haldankar reference does not anticipate, nor render obvious, the invention as claimed.

Further, a person of skill in the art would have had no motivation to modify Haldankar to arrive at the present invention. None of the pigment components disclosed in Haldankar is a near infrared absorbing agent, nor is there any discussion in Haldankar that use of such agents would be beneficial, suitable or useful in the surface coating compositions of the invention, which are specifically designed to impart pigment (color) to the coated surfaces. Further, as Haldankar is directed primarily to multipurpose dispersants and formulations containing such dispersants, a person of ordinary skill would have no motivation to make the modification which would have resulted in the present invention.

Accordingly, for at least the reasons given above, it is respectfully requested that the Examiner reconsider and withdraw the §§ 102 and 103 rejections based upon Haldankar.

VI. Rejections Based Upon Oi, Hattori, and Akiyama

At pages 7-8, the Examiner has rejected claims 1-19 under 35 U.S.C. § 102(b) or (e) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over, U.S. Patent Nos. 5,788,914 ("Oi"), U.S. Patent No. 6,051,361 ("Hattori"), or U.S. Patent No. 6,136,425 ("Akiyama"), each taken individually. As basis for the rejections, the Examiner states that each of these references discloses and exemplifies near infrared liquid coating compositions defined "basically" as containing a near infrared absorbing agent, a carrier vehicle which includes at least one acrylic polymer, a solvent system, and other conventional ingredients. Therefore, according to the Examiner, each of Oi, Hattori, and Akiyama anticipate the presently claimed invention "in both content and character."

With respect to the asserted obviousness rejection, the Examiner further states: "As to the dependent claims, the limitations are either disclosed by the patentees, suggested by the patentees, or would have been obvious to the skilled artisan with a reasonable expectation of success." No further analysis as to how any of the references make the claims obvious is provided. The applicants respectfully traverse this rejection.

Oi teaches a near infrared ray absorbing compound having an improved stability and light resistance having the structure (1) as shown, *e.g.*, at col. 3, lines 1-67. Oi provides the general teaching that a "heat ray absorbing material" can be prepared from the near infrared ray

absorbing compound of the Oi invention by: (i) kneading the compound into a resin and molding the resin; (ii) preparing a coating composition containing the near infrared absorbing compound; (iii) adding the near infrared ray absorbing compound to an adhesive. Col. 12, lines 9-18. Oi teaches that the compound (1) can be incorporated into a coating composition, but does not teach or suggest the amount of the solvent to be included in the composition.

Hattori discloses a "light sensitive composition" for use as an image forming material. The composition of Hattori includes a compound capable of generating an acid on exposure of actinic light, a compound having a chemical bound capable of being decomposed by an acid, an infrared absorber, and a polymer obtained by polymerization of a polymerizable composition comprising an ethylenically unsaturated monomer having a solubility parameter of 13 or more. As is taught in Hattori, the monomer from which this polymer may be prepared may includes specific acrylic copolymers. In preparing a light sensitive plate, Hattori discloses that the compositions can be mixed with various solvents. However, Hattori does not disclose a liquid composition for coating surfaces containing the amounts of components as recited in the claims.

Akiyama discloses a printing material and a method of preparing a printing material. The printing material of Akiyama requires a specific support layer onto which several layers are applied, including an imaging layer that may contain an infrared light absorbent and a binder. No liquid composition containing the near infrared absorbent and/or the binder is disclosed, nor is there any disclosure of a solvent or solvent system for use with the ingredients of the imaging layer. The portion of Akiyama to which the Examiner identifies as disclosing solvents (col. 29, lines 42,48) teaches only solvents for use in the preparation of the sublimation agent containing layer, the heat fusible layer, and the ablation layer on the support of the printing material system disclosed in Akiyama.

Neither Oi, Hattori, or Akiyama teaches or suggests each element of the claimed invention. None teaches a liquid composition for coating surfaces that includes 0.0% to about 2% by weight of a near infrared absorbing agent, about 20% by weight to about 60% by weight of a carrier vehicle, and about 40% by weight to about 80% by weight of a solvent system. Akiyama teaches use of no solvents, and neither Hattori nor Oi teach the component parts of the liquid coating layer in the amounts recited in the claims. Accordingly, for at least the reasons given above, neither of the three references cited by the Examiner teaches or suggest each

element of the claims. Therefore, neither anticipate nor render obvious the recited invention. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the rejection.

CONCLUSION

It is respectfully requested that the Examiner reconsider and withdraw all pending rejections and allow pending claims 1-19 at the earliest opportunity.

Respectfully submitted,

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10 December 2002 By: _____
(Date)

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Marked Up Version of Claims 1 and 6

U.S. Patent Application No. 09/641,745

Shown below is a marked up version of the amended claims illustrating the changes made. Please note that deletions are indicated by brackets and insertions are indicated by underlining.

1. (Amended) A liquid composition for coating surfaces comprising about 0.01% by weight to about 2% by weight of a near infrared absorbing agent, about 20% by weight to about 60% by weight of a carrier vehicle [;] , and about 40% by weight to about 80% by weight of a solvent system, each based on the total weight of the composition.

6. (Amended) The liquid composition for coating surfaces of claim 1, wherein the carrier vehicle is [at least one polymer selected from homopolymers and copolymers] at least one of a homopolymer or a copolymer selected from [of] the group consisting of cellulose, polyacrylics, polyurethanes, polyesters, polyvinyls, polyamides, polyolefins, and derivatives and mixtures thereof.